

Autodesk Robot Structural Analysis Training Course

Course Overview

Course Length: 16-Hours

- 16-Hours – 8 x 2-hour training sessions
- Remote training over MS Teams
- Sessions are recorded and download links for each session are provided for future use
- Training for up to 1-3 people
- Sessions can start within 7 days upon ordering
- Flexible sessions (for example, consecutive or Monday, Wednesday, Friday)
- Courses are private and topics can be customised to suit
- Includes Certificate of Completion

The Autodesk Robot Structural Analysis Training Course provides practical instructor-led training for structural engineers, civil engineers, steel detailers, building designers, BIM managers, and engineering consultants who need to perform structural analysis, design validation, code compliance checks, and engineering optimisation using Autodesk Robot Structural Analysis Professional.

This Robot Structural Course teaches participants how to create analytical models, apply loads and combinations, perform linear and non-linear analysis, design steel and reinforced concrete structures, review results, and integrate structural workflows with Autodesk Revit and Autodesk Advance Steel.

Whether you are looking for a Robot Structural Analysis Course, Robot Structural Training, Robot Structural Analysis Professional Course, or Autodesk Robot Structural Analysis Training, this course provides practical engineering workflows that can be immediately applied to real-world projects.

Topics Covered

- Structural modelling
- Analytical models
- Steel design
- Reinforced concrete design
- Load cases
- Load combinations
- Static analysis
- Dynamic analysis
- Wind loading
- Seismic analysis
- Structural optimisation
- Code checking

- Revit integration
- Advance Steel integration
- Structural reporting

Prerequisites

Participants should have a basic understanding of structural engineering principles and structural design workflows.

Experience with Autodesk Revit Structure, Autodesk Advance Steel, AutoCAD, or other structural engineering software is beneficial but not essential.

A sound understanding of structural analysis concepts, engineering calculations, and design standards will help participants gain maximum value from the course.

Training Guide Contents

Chapter 1: Introduction to Robot Structural Analysis

- Autodesk Robot Structural Analysis Overview
- User Interface and Navigation
- Project Types
- Analysis Workflow Fundamentals

Chapter 2: Structural Modelling Fundamentals

- Creating Structural Models
- Nodes, Bars and Panels
- Structural Geometry Creation
- Model Organisation

Chapter 3: Materials and Structural Properties

- Material Libraries
- Steel Materials
- Concrete Materials
- Section Properties

Chapter 4: Supports, Releases and Boundary Conditions

- Support Definitions
- Structural Releases
- Constraints
- Stability Verification

Chapter 5: Loads and Load Cases

- Dead Loads
- Live Loads
- Wind Loads
- Temperature Loads
- User Defined Loads

Chapter 6: Load Combinations and Design Codes

- Load Combination Generation
- Design Standards

- Code Requirements
- Design Criteria Setup

Chapter 7: Structural Analysis

- Linear Static Analysis
- Second Order Analysis
- Buckling Analysis
- Structural Behaviour Review

Chapter 8: Advanced Structural Analysis

- Dynamic Analysis
- Modal Analysis
- Seismic Analysis
- Vibration Studies

Chapter 9: Steel Design and Code Checking

- Steel Member Design
- Code Compliance Checks
- Member Optimisation
- Structural Verification

Chapter 10: Reinforced Concrete Design

- Concrete Member Design
- Slabs and Walls
- Reinforcement Review
- Concrete Code Checks

Chapter 11: BIM Integration with Revit and Advance Steel

- Revit Analytical Model Exchange
- Synchronising Structural Models
- Updating Design Changes
- Advance Steel Integration
- BIM Coordination Workflows

Chapter 12: Results, Reporting and Project Workshop**

- Structural Results Interpretation
- Deflections and Forces
- Design Reports
- Engineering Documentation
- Project-Based Structural Analysis Workshop

**Customised training and simulation studies based on commercial projects may take longer than 16-hours and hours required will be pre-determined prior to commencement of training.